Journal of **Chronic Diseases**

Volume 40, 1987

List of Contents and Author Index

PERGAMON PRESS

Oxford · New York · Beijing · Frankfurt · São Paulo
Sydney · Tokyo · Toronto

Journal of Chronic Diseases

An International Journal
Devoted to Research and Scholarship in Clinical Epidemiology and Chronic Illness

Editors

ALVAN R. FEINSTEIN
New Haven, CT
Professor, Departments of Medicine and Epidemiology
Director, Clinical Epidemiology Unit
Yale University School of Medicine

WALTER O. SPITZER
Montreal, Quebec
Strathcona Professor and Chairman, Department of Epidemiology & Biostatistics, Professor, Department of Medicine, McGill University Faculty of Medicine

Editor Emeritus
DAVID P. EARLE
Chicago, IL
Otho S. A. Sprague Professor of Medicine Emeritus
Northwestern University Medical School

Editorial Advisory Board

PAUL B. BEESON
21013 N.E. 122nd St, Redmond, Washington

W. J. H. BUTTERFIELD
Addeabrooke's Hospital, Cambridge, England

LEIGHTON E. CLUFF
The Robert Wood Johnson Foundation
Princeton, New Jersey

JAMES E. GRIZZLE
Univeristy of North Carolina, Chapel Hill,
North Carolina

LOUIS LASAGNA
Tufts University, Boston, Massachusetts

DAVID L. SACKETT
McMaster University Medical Center
Hamilton, Ontario

Editorial Consultants

OTTO APPENZELLER
Albuquerque, NM
ELIZABETH BARRETT-CONNOR
La Jolla, CA
RENALDO N. BATTISTA
Montreal, Quebec
JOHN W. BERG
Denver, CO
NATHANIEL I. BERLIN
Chicago, IL
NORMAN F. BOYD
Toronto, Ontario
CHARLES C. J. CARPENTER
Providence, RI
MARY E. CHARLSON
New York, NY
RICHARD G. CORNELL
Ann Arbor, MI
WILLIAM D. DEWYS
Bethesda, MD
THEODORE C. EICKHOFF
Denver, CO
JOHN M. ESDAILE
Montreal, Quebec
MANNING FEINLEIB
Hyattsville, MD
NOBLE O. FOWLER
Cincinnati, OH
LEE GOLDMAN
Boston, MA
GERRY B. HILL
Montreal, Quebec
RALPH I. HORWITZ
New Haven, CT
THOMAS A. HUTCHINSON
Montreal, Quebec
MICHEL A. IBRAHIM
Chapel Hill, NC
MILOS JENICEK
Montreal, Quebec
ROBERT L. KANE
Minneapolis, MN
WILLIAM B. KANNELL
Boston, MA
MICHAEL S. KRAMER
Montreal, Quebec
LEWIS H. KULLER
Pittsburgh, PA
CALVIN M. KUNIN
Columbus, OH
LAWRENCE L. KUPPER
Chapel Hill, NC
LEONARD T. KURLAND
Rochester, MN
G. ROSS LANGLEY
Halifax, Nova Scotia
ANTHONY J. McMICHAEL
Adelaide, Australia
FREDERICK MOSTELLER
Boston, MA
EDMOND A. MURPHY
Baltimore, MD
ADRIAN M. OSTFELD
New Haven, CT
ROBERT G. PETERSDORF
Washington, DC
BARRY PLESS
Montreal, Quebec
DAVID F. RANSOHOFF
New Haven, CT
BRUCE E. RODDA
Rahway, NJ
SAM SHAPIRO
Baltimore, MD
RICHARD B. SHEKELLE
Houston, TX
HERMAN TYROLER
Chapel Hill, NC
EDWARD H. WAGNER
Seattle, WA
T. FRANKLIN WILLIAMS
Bethesda, MD

Published Monthly

Publishing Office: Pergamon Journals Ltd, Journals Production Unit, Hennock Road, Marsh Barton, Exeter EX2 8NE, England (*Tel.* Exeter (0392) 51558; *Telex* 42749). Subscription and advertising enquiries from customers in North America should be sent to: Pergamon Journals Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, U.S.A., and for the remainder of the world to: Pergamon Journals Ltd, Headington Hill Hall, Oxford OX3 0BW, England (*Tel.* Oxford (0865) 64881).

Annual Subscription Rates 1987: Annual institutional subscription rate (1987) DM 815.00; 2 year institutional rate (1987/88) DM 1548.50; personal subscription rate for those whose library subscribes at the regular rate (1987) DM 214.00. Prices are subject to amendment without notice.

Microform Subscriptions and Back Issues: Back issues of all previously published volumes are available in the regular editions and on microfilm and microfiche. Current subscriptions are available on microfiche simultaneously with the paper edition and on microfilm on completion of the annual index at the end of the subscription year.

Copyright © 1987 Pergamon Journals Limited

It is a condition of publication that manuscripts submitted to this journal have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the publisher if and when the article is accepted for publication. However, assignment of copyright is not required from authors who work for organizations which do not permit such assignment. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature and translations. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, without permission in writing from the copyright holder.

Photocopying Information for Users in the U.S.A. The Item-fee Code for this publication indicates that authorization to photocopy items for internal or personal use is granted by the copyright holder for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service provided the stated fee for copying, beyond that permitted by Section 107 or 108 of the U.S. Copyright Law, is paid. The appropriate remittance of $3.00 per copy per article is paid directly to the Copyright Clearance Center Inc., 27 Congress Street, Salem, MA 01970.

Permission for other use. The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works or for resale. Specific written permission must be obtained from the publisher for such copying.

The Item-fee Code for this publication is: 0021-9681/87 $3.00 + 0.00

VOLUME 40

LIST OF CONTENTS

Number 1

Editorial

Alvan R. Feinstein and Walter O. Spitzer — 1 — Happy anniversary and an impending change of name

Original Articles

Ronette Russell-Briefel, Trena M. Ezzati, Jeffrey A. Perlman and Robert S. Murphy — 3 — Impaired glucose tolerance in women using oral contraceptives: United States, 1976–1980

Theda A. Foster and Gerald S. Berenson — 13 — Measurement error and reliability in four pediatric cross-sectional surveys of cardiovascular disease risk factor variables—The Bogalusa Heart Study

Karl E. Peace and Robert C. Schriver — 23 — *p*-Value and power computations in multiple look trials

Mary E. Charlson and Frederic L. Sax — 31 — The therapeutic efficacy of critical care units from two perspectives: a traditional cohort approach vs a new case–control methodology

Leslie L. Roos Jr, J. Patrick Nicol and Sandra M. Cageorge — 41 — Using administrative data for longitudinal research: comparisons with primary data collection

François Béland — 51 — Identifying profiles of service requirements in a non-institutionalized elderly population

Benjamin F. Hankey and Max H. Myers — 65 — Black/white differences in bladder cancer patient survival

Robert W. Peters, Robert Byington, Daniel Arensberg, Lawrence M. Friedman, Donald W. Romhilt, Allan Barker, Charles Laubach, Gary W. Wilner and Sidney Goldstein — 75 — Mortality in the Beta Blocker Heart Attack Trial: circumstances surrounding death

Gregory L. Burke, Larry S. Webber, Charles L. Shear, Stephen A. Zinkgraf, Carey G. Smoak and Gerald S. Berenson — 83 — Sources of error in measurement of children's blood pressure in a large epidemiologic study: Bogalusa Heart Study

Ralph I. Horwitz — 91 — The experimental paradigm and observational studies of cause–effect relationships in clinical medicine

Number 2

Editorial

Alvan R. Feinstein and Walter O. Spitzer — 101 — The unknown reviewer: an expression of policy and gratitude

Original Articles

James P. Utz, L. Joseph Melton, III, Stephen H. Kan and B. Lawrence Riggs — 105 — Risk of osteoporotic fractures in women with breast cancer: a population-based cohort study

Jane A. Cauley, Andrew M. Petrini, Ronald E. LaPorte, Rivka Black Sandler, Constance M. Bayles, Robert J. Robertson and Charles W. Slemenda — 115 — The decline of grip strength in the menopause: relationship to physical activity, estrogen use and anthropometric factors

Mats Palmér, Sverker Ljunghall, Göran Åkerström, Hans-Olov Adami, Reinhold Bergström, Lars Grimelius, Claes Rudberg and Henry Johansson — 121 — Patients with primary hyperparathyroidism operated on over a 24-year period: temporal trends of clinical and laboratory findings

Lucile L. Adams, Richard A. Washburn, Gwendolyn T. Haile and Lewis H. Kuller — 131 — Behavioral factors and blood pressure in black college students

Hirotsugu Ueshima, Kozo Tatara, Shintaro Asakura and Masashi Okamoto — 137 — Declining trends in blood pressure level and the prevalence of hypertension, and changes in related factors in Japan, 1956–1980

David S. Strogatz, H. A. Tyroler, Laurence O. Watkins and Curtis G. Hames — 149 Electrocardiographic abnormalities and mortality among middle-aged black men and white men of Evans County, Georgia

Curtis J. Mettlin, Elinor R. Schoenfeld, Nachimuthu Natarajan and Okhee Suh — 157 Interhospital differences in cancer survival

Ruth Ottman — 165 Simple test of the Multifactorial-Polygenic Model with sex dependent thresholds

Gordon Guyatt, Stephen Walter and Geoff Norman — 171 Measuring change over time: assessing the usefulness of evaluative instruments

Second Thoughts

Richard V. Lee — 179 Midwinter thaw: parsnips and people

Letter to the Editors

J. A. Knottnerus — 183 Subject selection in hospital-based case–control studies

Olli S. Miettinen — 186 Response: Subject selection in case–referent studies with a secondary base

Number 3

Editorial

Alvan R. Feinstein — 189 The fragility of an altered proportion: a simple method for explaining standard errors

Original Articles

Amnon Sonnenberg — 193 Causative factors in the etiology of peptic ulcer disease become effective before the age of 15 years

Jay M. Sosenko and Laurence B. Gardner — 203 Attribute frequency and misclassification bias

Hiroshi Shibata, Hiroshi Haga, Yasuo Suyama, Shu Kumagai and Toshihiko Seino — 209 Serum total and HDL cholesterols according to reproductive status in Japanese females

A. K. Sjølie and A. Green — 215 Blindness in insulin-treated diabetic patients with age at onset <30 years

Marianna K. Fordyce-Baum, Robert Duncan, Anthony Kafatos and George Christakis — 221 The cross-cultural study of U.S. and Greek adolescents: blood pressure data

Terry C. Camacho, George A. Kaplan and Richard D. Cohen — 229 Alcohol consumption and mortality in Alameda County

K. M. Stavraky, J. E. Kincade, M. A. Stewart and A. P. Donner — 237 The effect of socioeconomic factors on the early prognosis of cancer

Judy Z. Miller, Myron H. Weinberger, Sandra A. Daugherty, Naomi S. Fineberg, Joe C. Christian and Clarence E. Grim — 245 Heterogeneity of blood pressure response to dietary sodium restriction in normotensive adults

Markku Heliövaara, Paul Knekt and Arpo Aromaa — 251 Incidence and risk factors of herniated lumbar intervertebral disc or sciatica leading to hospitalization

Markku Heliövaara — 259 Occupation and risk of herniated lumbar intervertebral disc or sciatica leading to hospitalization

Marianne Hagman, Lars Wilhelmsen, Hans Wedel and Kjell Pennert — 265 Risk factors for angina pectoris in a population study of Swedish men

Letters to the Editors

Louis Lasagna — 277 Ethics and informed consent

William J. Mackillop and Pauline A. Johnston — 278 Response

Reuel A. Stallones† — 279 The concept of cause in disease

W. E. Stehbens — 280 Response

Occasional Book Reviews — 281

Number 4

Editorial

Alvan R. Feinstein — 283 $\bar{X}$ and ipr_p: an improved summary for scientific communication

Original Articles

Päivi Leino, Seppo Aro and Jeddi Hasan — 289 Trunk muscle function and low back disorders: a ten-year follow-up study

William O. Williford, Stephen F. Bingham, David G. Weiss, Joseph F. Collins, Keith T. Rains and William F. Krol — 297 The "constant intake rate" assumption in interim recruitment goal methodology for multicenter clinical trials

David S. Freedman, Sathanur R. Srinivasan, Larry S. Webber, Gregory L. Burke and Gerald S. Berenson — 309 Black–white differences in serum lipoproteins during sexual maturation: the Bogalusa Heart Study

Hal Morgenstern, William M. Glazer, Laura D. Gibowski and Sharon Holmberg — 319 Predictors of tardive dyskinesia: results of a cross-sectional study in an outpatient population

Janet B. Henrich — 329 The association between migraine and cerebral vascular events: an analytical review

Bonita R. Siegal, Robert J. Calsyn and Robert M. Cuddihee — 337 The relationship of social support to psychological adjustment in end-stage renal disease patients

Frank Vinicor, Stuart J. Cohen, Steven A. Mazzuca, Nicky Moorman, Madelyn Wheeler, Tom Kuebler, Susan Swanson, Patricia Ours, S. Edwin Fineberg, Edwin E. Gordon, William Duckworth, James A. Norton, Naomi S. Fineberg and Charles M. Clark Jr — 345 DIABEDS: a randomized trial of the effects of physician and/or patient education on diabetes patient outcomes

Second Thoughts

Richard V. Lee — 357 Spring color

Special Communication

Cornelia J. Baines — 361 Breast palpation technique: what is the finger pad?

Letters to the Editors

William J. Mackillop and Pauline A. Johnston — 363 Controlled clinical trials: an ethical imperative?

David J. Roy — 364 Response

Paul G. H. Mulder — 365 Time-dependency in Cox's regression analysis

Richard W. Hornung, Kyle Steenland and Jay Beaumont — 366 Response

Paul Silcocks — 367 Screening and breast cancer

Annie J. Sasco — 368 Response: Etiologic fraction in case–control studies for the evaluation of screening

Errata — 369

Number 5

Editorial

John Higginson — 371 Publication of "negative" epidemiological studies

Original Articles

Mary E. Charlson, Peter Pompei, Kathy L. Ales and C. Ronald MacKenzie — 373 A new method of classifying prognostic comorbidity in longitudinal studies: development and validation

Sylvia Wassertheil-Smoller, Richard M. Steingart, John P. Wexler, Jonathan Tobin, Nancy Budner, Joseph Wachspress, Lloyd Lense and Susan Slagle — 385 Nuclear scans: a clinical decision making tool that reduces the need for cardiac catheterization

Russell E. Glasgow, Kevin D. McCaul and Lorraine C. Schafer — 399 — Self-care behaviors and glycemic control in Type I diabetes

Richard F. Gillum — 413 — The association of the ratio of waist to hip girth with blood pressure, serum cholesterol and serum uric acid in children and youths aged 6–17 years

Richard F. Gillum — 421 — The association of body fat distribution with hypertension, hypertensive heart disease, coronary heart disease, diabetes and cardiovascular risk factors in men and women aged 18–79 years

Betsy Foxman, R. Burciaga Valdez, Kathleen N. Lohr, George A. Goldberg, Joseph P. Newhouse and Robert H. Brook — 429 — The effect of cost sharing on the use of antibiotics in ambulatory care: results from a population-based randomized controlled trial

James F. Jekel — 439 — "Rainbow Reviews" III: Recent publications of the National Center for Health Statistics

Donna Shai and Ira Rosenwaike — 445 — Mortality among Hispanics in metropolitan Chicago: an examination based on vital statistics data

Second Thoughts

R. T. Ravenholt — 453 — Tuberculosis control assisted by family planning

Special Communication — 457 — Initial report. Report on Workshop held 6 December 1985 at the Institute of Health Policy Analysis, Georgetown University Medical Center, 2121 Wisconsin Avenue, N.W., Washington, D.C.

Number 6

Editorial

Sidney Katz — 459 — The science of quality of life

Keynote Address

Walter O. Spitzer — 465 — State of science 1986: quality of life and functional status as target variables for research

Original Articles

John E. Ware Jr — 473 — Standards for validating health measures: definition and content

William D. Spector, Sidney Katz, John B. Murphy and John P. Fulton — 481 — The hierarchical relationship between activities of daily living and instrumental activities of daily living

Sharon Wood-Dauphinee and J. Ivan Williams — 491 — Reintegration to normal living as a proxy to quality of life

Vincent Mor — 501 — Discussion: Wood-Dauphinee and Williams' "Reintegration to normal living as a proxy to quality of life"

Stephanie C. Warner and J. Ivan Williams — 503 — The Meaning in Life Scale: determining the reliability and validity of a measure

Judy O'Young and Bucknam McPeek — 513 — Quality of life variables in surgical trials

Hans Troidl, Juergen Kusche, Karl-Heinz Vestweber, Ernst Eypasch, Ludwig Koeppen and Bertil Bouillon — 523 — Quality of life: an important endpoint both in surgical practice and research

Jean-Claude M. Lasry, Richard G. Margolese, Roger Poisson, Henry Shibata, David Fleischer, Denise Lafleur, Sandra Legault and Suzanne Taillefer — 529 — Depression and body image following mastectomy and lumpectomy

Vincent Mor — 535 — Cancer patients' quality of life over the disease course: lessons from the real world

John N. Morris and Sylvia Sherwood — 545 — Quality of life of cancer patients at different stages in the disease trajectory

Renaldo N. Battista — 555 — Discussion: Morris and Sherwood's "Quality of life of cancer patients at different stages in the disease trajectory"

Astrid E. Fletcher, Barbara M. Hunt and Christopher J. Bulpitt — 557 Evaluation of quality of life in clinical trials of cardiovascular disease

Renaldo N. Battista — 567 Discussion: Fletcher, Hunt, and Bulpitt's "Evaluation of quality of life in clinical trials of cardiovascular disease"

Johannes Siegrist — 571 Impaired quality of life as a risk factor in cardiovascular disease

Matthew H. Liang and Celeste Robb-Nicholson — 579 Health status and utility measurement viewed from the right brain: experience from the rheumatic diseases

David A. Lane — 585 Utility, decision, and quality of life

George W. Torrance — 593 Utility approach to measuring health-related quality of life

Michael F. Drummond — 601 Discussion: Torrance's "Utility approach to measuring health-related quality of life"

Michael F. Drummond — 605 Resource allocation decisions in health care: a role for quality of life assessments?

Jane E. Sisk — 617 Discussion: Drummond's "Resource allocation decisions in health care: a role for quality of life assessment?"

David A. Lane and Tom A. Hutchinson — 621 The notion of "acceptable risk": the role of utility in drug management

Perspectives

Richard G. Margolese — 627 The place of psychosocial studies in medicine and surgery

David S. Greer — 629 Quality of life measurement in the clinical realm

John C. Goligher — 631 Judging the quality of life after surgical operations

Alvan R. Feinstein — 635 Clinimetric perspectives

Olli S. Miettinen — 641 Quality of life from the epidemiologic perspective

Frederick Mosteller — 645 Implications of measures of quality of life for policy development

Number 7

Original Articles

Dag Isacson and Jan Stålhammar — 651 Prescription drug use among diabetics—a population study

C. A. Martin, M. S. T. Hobbs and B. K. Armstrong — 661 Estimation of myocardial infarction mortality from routinely collected data in Western Australia

L. A. Clark, L. Denby, D. Pregibon, G. A. Harshfield, T. G. Pickering, S. Blank and J. H. Laragh — 671 A quantitative analysis of the effects of activity and time of day on the diurnal variations of blood pressure

Michael S. Kramer and Jean-François Boivin — 683 Toward an "unconfounded" classification of epidemiologic research design

J. P. Pierce, T. Dwyer, E. DiGiusto, T. Carpenter, C. Hannam, A. Amin, C. Yong, G. Sarfaty, J. Shaw, N. Burke and Quit for Life Steering Committee — 689 Cotinine validation of self-reported smoking in commercially run community surveys

W. Dana Flanders and Philip H. Rhodes — 697 Large sample confidence intervals for regression standardized risks, risk ratios, and risk differences

Mary E. Charlson, Frederic L. Sax, C. Ronald MacKenzie, Robert L. Braham, Suzanne D. Fields and R. G. Douglas Jr — 705 Morbidity during hospitalization: can we predict it?

Thierry Lang, Patrice Degoulet, Françoise Aime, Claude Devries, Marie-Christine Jacquinet-Salord and Christiane Fouriaud — 713 Relationship between alcohol consumption and hypertension prevalence and control in a French population

John Thomas, Kofi Semenya, Caroline B. Thomas, D. Johniene Thomas, William B. Neser, Thomas A. Pearson and Richard F. Gillum — 721 Precursors of hypertension in black compared to white medical students

T. Gregory Hislop, Nancy E. Waxler, Andrew J. Coldman, J. Mark Elwood and Lisa Kan — 729 The prognostic significance of psychosocial factors in women with breast cancer

Second Thoughts

Philip R. J. Burch — 737 Whither preventive medicine?

Erratum — 741

Number 8

Original Articles

Kirk J. Rodysill — 743 Postmenopausal osteoporosis—intervention and prophylaxis. A review

Peter Peduzzi, Theodore Holford, Katherine Detre and Yick-Kwong Chan — 761 Comparison of the logistic and Cox regression models when outcome is determined in all patients after a fixed period of time

Robert E. Dales, James A. Hanley, Pierre Ernst and Margaret R. Becklake — 769 Computer modelling of measurement error in longitudinal lung function data

Paul E. Leaverton, Paul D. Sorlie, Joel C. Kleinman, Andrew L. Dannenberg, Lillian Ingster-Moore, William B. Kannel and Joan C. Cornoni-Huntley — 775 Representativeness of the Framingham risk model for coronary heart disease mortality: a comparison with a national cohort study

Bradley O. Boekeloo, Joyce A. Mamon and Craig K. Ewart — 785 Identifying coronary-prone behavior in adolescents using the Bortner Self-rating Scale

Bjarne K. Jacobsen and Dag S. Thelle — 795 The Tromsø Heart Study: the relationship between food habits and the body mass index

Dennis Gray, Douglas MacAdam and Duncan Boldy — 801 A comparative cost analysis of terminal cancer care in home hospice patients and controls

Annette M. C. O'Connor, Norman F. Boyd, Padraig Warde, L. Stolbach and James E. Till — 811 Eliciting preferences for alternative drug therapies in oncology: influence of treatment outcome description, elicitation technique and treatment experience on preferences

Second Thoughts

Richard V. Lee — 819 Olfaction—and the smell of summer

Letters to the Editors

D. Commenges, P. Barberger-Gateau, J. F. Dartigues, P. Loiseau and R. Salamon — 823 Markov processes and logrank tests

Argye Hillis, Maureen Maguire, Barbara Hawkins and M. Marvin Newhouse — 824 Response

Karl E. Peace — 825 "Evaluable" vs "evaluatable": a postscript

Comment to the Editors

Daniel Smith — 827 Estimating epidemiologic parameters by regression

Tim Wilcosky and Lloyd Chambless — 828 Response

Number 9

Variance and Dissent

Allan S. Detsky, Donald Redelmeier and Howard B. Abrams — 831 What's wrong with decision analysis? Can the left brain influence the right?

Response

Stephen G. Pauker and Jerome P. Kassirer — 837 Marchiafava-bignami disease among academicians in Toronto: can decision analysis help?

Original Articles

Veterans Administration Cooperative Study Group on Antihypertensive Agents 839 Urinary and serum electrolytes in untreated black and white hypertensives

Paul Sorlie, Edward Lakatos, William B. Kannel and **Bartolome Celli** 849 Influence of cigarette smoking on lung function at baseline and at follow-up in 14 years: the Framingham Study

H. Dayal, L. Polissar, C. Y. Yang and **S. Dahlberg** 857 Race, socioeconomic status, and other prognostic factors for survival from colo-rectal cancer

Theodore Pincus, Leigh F. Callahan and **Richard V. Burkhauser** 865 Most chronic diseases are reported more frequently by individuals with fewer than 12 years of formal education in the age 18–64 United States population

Barry M. Farr and **Jack M. Gwaltney Jr** 875 The problems of taste in placebo matching: an evaluation of zinc gluconate for the common cold

K. L. Ales and **M. E. Charlson** 881 In search of the true inception cohort

Serafim Nanas, Wen-Harn Pan, Jeremiah Stamler, Kiang Liu, Alan Dyer, Rose Stamler, James A. Schoenberger and **Richard B. Shekelle** 887 The role of relative weight in the positive association between age and serum cholesterol in men and women

Michael J. Lichtenstein, Cynthia D. Mulrow and **Peter C. Elwood** 893 Guidelines for reading case–control studies

Second Thoughts

Douglas L. Weed 905 Epidemiology's triple crown

Letters to the Editors

Stephen W. Duffy and **Laszlo Tabar** 907 Screening for breast cancer

Martin T. Schechter, Anthony B. Miller, Cornelia J. Baines and **Geoffrey R. Howe** 909 Response

Colleen S. W. Rand 911 Obesity and caloric intake

E. Victor Adlin, Leonard E. Braitman and **John L. Stanton Jr** 912 Response

Erratum 913

Number 10

Randall E. Harris, Frank E. Harrell Jr, Kashineth D. Patil and **Rashid Al-Rashid** 915 The seasonal risk of pediatric/juvenile acute lymphocytic leukemia in the United States

Salvatore Panico, Egidio Celentano, Vittorio Krogh, Fabrizio Jossa, Eduardo Farinaro, Maurizio Trevisan and **Mario Mancini** 925 Physical activity and its relationship to blood pressure in school children

Anne-Linda Furstenberg and **Mathy D. Mezey** 931 Differences in outcome between black and white elderly hip fracture patients

David F. Cella, Paul B. Jacobsen, E. John Orav, Jimmie C. Holland, Peter M. Silberfarb and **Sameer Rafla (for Cancer and Leukemia Group B, Brookline, Massachusetts)** 939 A brief POMS measure of distress for cancer patients

R. S. C. Rodger, K. Fletcher, B. J. Fail, H. Rahman, L. Sviland and **P. J. Hamilton** 943 Factors influencing haematological measurements in healthy adults

Kristina Orth-Gomér and **Jeffrey V. Johnson** 949 Social network interaction and mortality. A six year follow-up study of a random sample of the Swedish population

A. Appels, P. Mulder, M. van't Hof, C. D. Jenkins, J. van Houtem and **F. Tan** 959 A prospective study of the Jenkins Activity Survey as a risk indicator for coronary heart disease in the Netherlands

Ronald Grossarth-Maticek, R. Frentzel-Beyme, D. Kanazir, M. Jankovic and H. Vetter — 967 Reported herpes-virus-infection, fever and cancer incidence in a prospective study

Michael B. Rocco, Herbert Sherman, E. Francis Cook, Monica Weisberg, Margaret Flatley and Lee Goldman — 977 Correlates of cardiac and sudden death after ambulatory monitoring in a community hospital. Importance of clinical characteristics, congestive heart failure, and tachyarrhythmias

Second Thoughts

Jan P. Vandenbroucke — 985 A short note on the history of the randomized controlled trial

Comment to the Editors

Colin B. Begg — 989 Risk factor analysis of screening data

Response

Martin T. Schechter, Anthony B. Miller, Cornelia J. Baines and Geoffrey R. Howe — 992 Response to "Risk factor analysis of screening data"

Number 11

Original Articles

Janet L. Stanford, Patricia Hartge, Louise A. Brinton, Robert N. Hoover and Ronald Brookmeyer — 995 Factors influencing the age at natural menopause

Pamela L. Horn, W. Douglas Thompson and Stephen M. Schwartz — 1003 Factors associated with the risk of second primary breast cancer: an analysis of data from the Connecticut Tumor Registry

William M. Vollmer, Larry R. Johnson, Lynn E. McCamant and A. Sonia Buist — 1013 Methodologic issues in the analysis of lung function data

S. Eriksson, K. Asplund, E. Hägg, F. Lithner, T. Strand and P. O. Wester — 1025 Clinical profiles of cerebrovascular disorders in a population-based patient sample

James J. Schlesselman, Bruce V. Stadel, Pamela Murray, Phyllis A. Wingo and George L. Rubin — 1033 Consistency and plausibility in epidemiologic analysis: application to breast cancer in relation to use of oral contraceptives

Neil Dubin, Dana R. Friedman, Paolo G. Toniolo and Bernard S. Pasternack — 1041 Breast cancer detection centers and case–control studies of the efficacy of screening

E. C. H. van Beresteyn, M. A. van't Hof, H. J. van der Heiden-Winkeldermaat, A. ten Have-Witjes and R. Neeter — 1051 Evaluation of the usefulness of the cross-check dietary history method in longitudinal studies

Second Thoughts

Richard V. Lee — 1059 Kanji

Letters to the Editors

Tim D. Spector and Alan J. Silman — 1063 Oral contraceptives and rheumatoid arthritis. Bias in observational studies of cause–effect relationships

John M. Esdaile and Ralph I. Horwitz — 1065 Response

Jan P. Vandenbroucke — 1067 A check-list for observational research?

John M. Esdaile and Ralph I. Horwitz — 1069 Response

1071 Erratum

Number 12

Variance and Dissent

Michael S. Kramer, David A. Lane and Tom A. Hutchinson — 1073 Analgesic use, blood dyscrasias, and case–control pharmacoepidemiology. A critique of the International Agranulocytosis and Aplastic Anemia Study

Dissent

Participants of the IAAAS 1083 Reply to Kramer, Lane and Hutchinson. The International Agranulocytosis and Aplastic Anemia Study

Original Articles

Sander Greenland 1087 Estimation of exposure-specific rates from sparse case–control data

Thomas Gjørup, Carsten Hendriksen, Ellinor Lund and **Edith Strømgård** 1095 Is growing old a disease? A study of the attitudes of elderly people to physical symptoms

Loic Le Marchand, Carl N. Yoshizawa, Laurence N. Kolonel and **Abraham M. Y. Nomura** 1099 Time trends in characteristics at diagnosis and subsequent survival for Caucasian, Japanese and Hawaiian women with breast cancer in Hawaii

C. A. Martin, M. S. T. Hobbs and **B. K. Armstrong** 1111 Identification of non-fatal myocardial infarction through hospital discharge data in Western Australia

L. Tenkanen, L. Teppo and **T. Hakulinen** 1121 Smoking and cardiac symptoms as predictors of lung cancer

Gordon H. Guyatt, Marie Townsend, Leslie B. Berman and **Jana L. Keller** 1129 A comparison of Likert and visual analogue scales for measuring change in function

Second Thoughts

Ralph I. Horwitz, Sarah M. Horwitz, Catherine M. Viscoli, Louis D. Gottlieb and **Mark L. Kraus** 1135 Craving and the social context: a new interaction model for enhancing recovery from alcoholism

Letter to the Editors

Stan Becker 1141 Sample size determination in case–control studies

Gail McKeown-Eyssen and **Duncan C. Thomas** 1144 Response

Comment to the Editors

Joseph B. Keller 1147 Misuse of game theory

Response

George A. Diamond 1148 A gamesaving volley

Joseph B. Keller 1149 Comment on Diamond's response

George A. Diamond 1149 Comment on Keller's response

Supplement 1

ADVANCES IN HEALTH ASSESSMENT CONFERENCE PROCEEDINGS

v James Wayne Bush, M.D., M.P.H. 1933–1985

Kathleen N. Lohr and **John E. Ware Jr** 1S Advances in Health Assessment: organization of the Conference and of this monograph

J. Leighton Read, Robert J. Quinn and **Martha Ann Hoefer** 7S Measuring overall health: an evaluation of three important approaches

Marilyn Bergner, Robert M. Kaplan and **John E. Ware Jr** 23S Evaluating health measures. Commentary: Measuring overall health: an evaluation of three important approaches

Sherrie H. Kaplan 27S Patient reports of health status as predictors of physiologic health measures in chronic disease

Donald L. Patrick 37S Commentary: Patient reports of health status as predictors of physiologic health in chronic disease

Jana M. Mossey and **Leslie L. Roos Jr**	41S	Using insurance claims to measure health status: the Illness Scale
John E. Wennberg	51S	Commentary: Using claims to measure health status
Eugene Nelson, John Wasson, John Kirk, Adam Keller, Donald Clark, Allen Dietrich, Anita Stewart and **Michael Zubkoff**	55S	Assessment of function in routine clinical practice: description of the COOP Chart method and preliminary findings
R. Heather Palmer	65S	Commentary: Assessment of function in routine clinical practice
Donald M. Berwick, Simon Budman, Josephine Damico-White, Michael Feldstein and **Gerald L. Klerman**	71S	Assessment of psychological morbidity in primary care: explorations with the General Health Questionnaire
Kenneth B. Wells	81S	Commentary: Assessment of psychological morbidity in primary care
Robert A. Pearlman	85S	Development of a functional assessment questionnaire for geriatric patients: the Comprehensive Older Persons' Evaluation (COPE)
Robert L. Kane	95S	Commentary: Functional assessment questionnaire for geriatric patients—or the clinical Swiss army knife
Robert H. Pantell and **Catherine C. Lewis**	99S	Measuring the impact of medical care on children
Barbara Starfield	109S	Child health status and outcome of care: a commentary on measuring the impact of medical care on children
L. Gary Hart and **Roger W. Evans**	117S	The functional status of ESRD patients as measured by the Sickness Impact Profile
Robert H. Brook and **Caren J. Kamberg**	131S	General health status measures and outcome measurement: a commentary on measuring functional status
Bernie J. O'Brien, Martin Buxton and **Brian A. Ferguson**	137S	Measuring the effectiveness of heart transplant programmes: quality of life data and their relationship to survival analysis
Lee Sechrest and **Diane Pitz**	155S	Commentary: Measuring the effectiveness of heart transplant programmes
Joan L. Pinsky, Paul E. Leaverton and **Joseph Stokes III**	159S	Predictors of good function: the Framingham Study
Janet L. Berkeley, Ilana Israel and **Joseph Stokes III**	169S	Health assessment in the Framingham Offspring Study: a research proposal
Reuel A. Stallones ✠	177S	Epidemiological studies of health: a commentary on the Framingham Studies
Walter O. Spitzer	181S	Commentary: Predictors of good function: the Framingham Heart Study and health assessment in the Framingham Offspring/Spouse Study
Avedis Donabedian, Jack Elinson, Walter Spitzer and **Alvin Tarlov**	183S	Advances in Health Assessment Conference discussion panel
Announcement	193S	Advances in Health Assessment: II

Supplement 2

TIME-RELATED FACTORS IN CANCER EPIDEMIOLOGY

Preface

Duncan C. Thomas, Charles C. Brown, Kenneth C. Chu, David F. Goldsmith and **Rodolfo Saracci** V Time-related factors in cancer epidemiology

PART I: EPIDEMIOLOGICAL INSIGHTS FROM EXAMINATION OF TIME-RELATED FACTORS

Introductory Remarks

William J. Blot and **Joseph F. Fraumeni Jr** 1S Time-related factors in cancer epidemiology

Haroutune K. Armenian 9S Incubation periods of cancer: old and new

Sander Greenland 17S Interpreting time-related trends in effect estimates

Specific Risk Factors

Margaret E. Mattson and **Larry G. Kessler** 25S The use of time-related epidemiologic data on smoking for planning cancer control programs

Demetrius Albanes, Arthur Schatzkin and **Marc S. Micozzi** 39S Time-related factors in research on diet and cancer

Charles E. Land 45S Temporal distributions of risk for radiation-induced cancers

M. C. Pike 59S Age-related factors in cancers of the breast, ovary, and endometrium

PART II: STATISTICAL METHODS FOR EXAMINING TIME-RELATED FACTORS

Duncan C. Thomas 71S Pitfalls in the analysis of exposure–time–response relationships

Techniques for Fitting and Checking Exposure–Time–Response Models

Jerry Halpern and **Alice S. Whittemore** 79S Methods for analyzing occupational cohort data with application to lung cancer in U.S. uranium miners

Norman Breslow and **Bryan Langholz** 89S Nonparametric estimation of relative mortality functions

Kenny S. Crump, Bruce C. Allen, Richard B. Howe and **Patrick W. Crockett** 101S Time-related factors in quantitative risk assessment

Allan H. Smith 113S Looking backwards from outcome to exposure to assess cancer latency

David F. Goldsmith 119S Calculating cancer latency using data from a nested case–control study of prostatic cancer

David G. Clayton and **John M. Kaldor** 125S Diagnostic plots for departures from proportional hazards in cohort study data

Edward D. Lustbader and **Suresh H. Moolgavkar** 133S Some problems of inference in cohort studies

James Robins 139S A graphical approach to the identification and estimation of causal parameters in mortality studies with sustained exposure periods

Biomathematical Models for Cancer

Kenneth C. Chu 163S A nonmathematical view of mathematical models for cancer

Charles C. Brown and **Kenneth C. Chu** 171S Use of multistage models to infer stage affected by carcinogenic exposure: example of lung cancer and cigarette smoking

Mark Krailo, Duncan C. Thomas and **Malcolm C. Pike** 181S Fitting models of carcinogenesis to a case–control study of breast cancer

Harvey Checkoway and **Douglas Crawford-Brown** 191S Metabolic modeling of organ-specific doses to carcinogens as illustrated with alpha-radiation emitting radionuclides

Duncan C. Thomas 201S Use of computer simulation to explore analytical issues in nested case–control studies of cancer involving extended exposures: methods and preliminary findings

Charles C. Brown 209S Final discussion—Symposium on Time-related Factors in Cancer Epidemiology